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ABSTRACT

Current knowledge and practice relating to young children's aesthetic development and education are reviewed in this state-of-the-art report. Beginning with a brief section highlighting theoretical problems and approaches to the psychological study of aesthetic response, the review subsequently describes three common strategies used in aesthetic research: the general methodology for experimental aesthetics, tests of aesthetic sensitivity, and the structured interview method. The third and largest section of the paper reviews a selection of arts studies concerning aesthetic development and education. The studies reviewed are organized into three clusters of research activity: (1) developmental studies emphasizing age-related trends in aesthetic response, (2) studies concerned primarily with individual and group differences in aesthetic response (excepting age), and (3) deliberate attempts to influence the course of aesthetic growth and development. Developmental studies reviewed include investigations of children's aesthetic response to stimulus complexity as well as their aesthetic discrimination and judgement. The discussion of intervention research focuses on aesthetic response training studies in addition to broader programmatic interventions. It is noted that all three streams of research activity are predominately oriented toward the visual arts. However, research focusing on music, literature, and related art forms is also discussed. (RH)

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CHILDREN'S AESTHETICS

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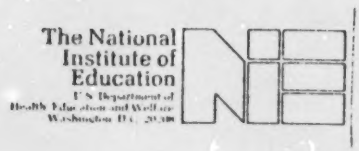

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INTRODUCTION

A kindergarten teacher in Seattle, Washington, regularly arranges for her class of 5-year-old children to visit an art gallery which showcases oil, acrylic, lithograph, and watercolor productions by regional artists. She also encourages her young charges and their parents to attend light classical and "pops" concerts by the local symphony orchestra. Each year this teacher schedules visits to her class by a puppeteer and members of a pantomime theater group to demonstrate their talents and converse with the children. As an active sculptress, she displays her own work in class as an impetus to children's clay modeling activities. Queried about these various experiences, this teacher maintains that she is stimulating children's aesthetic growth through exposure to the arts. Her sensitivity to the myriad opportunities for aesthetic experience seems exceeded only by her general enthusiasm for the arts in education.

But what, exactly, does it mean to speak of aesthetic growth and aesthetic education? What is the role of experience, such as exposure to the arts, in fostering aesthetic growth or development? Whatever this role may be, by what mechanisms or processes do the young progress toward a mature aesthetic attitude?

These are but a few of the many questions about aesthetic development and education that challenge and perplex those scholars concerned with aesthetics. These scholars generally agree that aesthetic development is distinguished by the search for beauty, particularly within the context of art and artistic experience (Child, 1969; Curtis, 1981). Many also seem to agree that peak experiences of joy or wonderment inhere in this striving process, though undoubtedly occurring on different levels and in different forms across the life span. The experience of a jubilant

preschooler at play with finger paints stands in marked contrast to an adult art critic who ponders the aesthetic qualities of a Van Gogh. Yet each in his or her own way, and probably for entirely different reasons, may share some intrinsic sense of the sublime. Sublime experience, in turn, seems to underscore a quality of life that is uniquely human. Accordingly, any concept of education framed in relation to the "good life" will usually require some attention to aesthetics.

The issue of aesthetic education seems particularly timely in view of evidence from the continuing National Assessment of Educational Progress Study (NAEP, 1981). According to recent nationwide assessments, successive cohorts of children and adolescents are showing declines in their knowledge and appreciation of the arts, achievements that have not been particularly impressive even in the past.

The very nature of aesthetic development, with its accompanying subjective experience, poses enormous problems for scholarly inquiry. Despite this, many scholars press on toward enlightened solutions to these problems, their goal being a fuller understanding of human aesthetic experience. Following this example, enlightenment about young children's aesthetic development and education is the major objective of this chapter. Enlightenment, of course, is a matter of degree. At best, the present "state of the art" about aesthetic study allows a progress report. This begins with a classification of some ideas about the nature and direction of aesthetics study. Subsequently, recent research on children's aesthetic development is reviewed with reflections on research issues and educational implications. Finally, the matter of formal attempts within the school to influence aesthetic development is addressed.

THE FORMAL STUDY OF AESTHETICS

Aesthetics as a field of formal inquiry bridges the disciplines of philosophy and psychology. As the senior discipline, philosophy has emphasized the analysis of beauty on rational, a priori grounds. Within psychology, an empirical research tradition known as experimental aesthetics has become a major force in the quest to understand human aesthetic response (Hare, 1981). This tradition features the methods of experimental science applied to questions about aesthetic sensitivity, preference, and judgment. A long-debated conceptual issue concerns whether aesthetic judgments are objective in the same sense that scientific judgments are and, if so, what this commonality implies for any meaningful distinction between science and art (Winterbourne, 1981).

Basic psychological questions about aesthetics are by what processes, in what sequences, and under what conditions humans develop and exercise an aesthetic attitude. Aesthetic attitude means an enduring predisposition to respond positively to beauty in all its forms, especially the arts.[1] The central cognitive component of aesthetic attitude is perception. Perception in aesthetics is said to be intrinsic (i.e., perception for perception's sake or, as Osborne (1979) puts it, "disinterested perception"). This means that a person attends to the qualities of a perceived object or event without accompanying utilitarian or ego concerns (e.g., concern for usefulness, economic value, moral considerations, or extraneous associations with past experience).

Philosophers disagree about the role of pleasure or satisfaction in aesthetic perception. But the frequency with which scholars of various theoretical persuasions refer to aesthetic satisfaction or enjoyment suggests a legitimate place for pleasure in aesthetics study. The precise nature of

pleasure remains at issue, but it is reasonable to suggest that aesthetic pleasure is immediately sensuous ("Isn't that marvelous!") and represents the affective dimension of a gradually more complex set of cognitive developments. These developments enable us to judge aesthetic properties and justify these judgments in a reflective manner (Beyer, 1974; Blanchee, 1974; Flannery, 1977; Kepperman, 1975). For artwork, it can be argued that goodness is proportionate to the satisfaction or interest it evokes or is capable of evoking in the perceiver. Satisfaction will be marked by an extension and clarification of consciousness, with emphases upon understanding, judgment, and decision making (Osborne, 1979).

A Word about Theory

Coherent theory may enable us to understand the course of and account for individual differences in aesthetic growth. To date, however, a full theoretical picture has not been developed. The problem about emotion in art has been especially knotty. To some extent, the situation reflects a scholarly preoccupation with aesthetic expression (read: creative productivity). It seems that creative thinking and performance have been conveniently offered as the consummative index for aesthetic sensitivity when, in fact, one can appreciate without creating and create without showing aesthetic awareness. Readers haunted by the spectre of creativity and its attendant issues (e.g., nature and definitions, measurements, antecedents to, and education for) are referred elsewhere (e.g., Stein, 1974; Barron & Harrington, 1981). In the proceeding few paragraphs theory is highlighted only as it is central to the psychological study of aesthetic response.

In recent years, Gardner's (1973-b) attempt to integrate developmental psychology with aesthetics in art is perhaps closest to serving a

complete meal to hungry students of aesthetics. This somewhat unsung work holds that three psychological systems--perceiving, feeling, and making--become integrated to empower the child's functional use of symbols. That is, symbolic activity is the fuel for a genuinely artistic process through which four streams of aesthetic experience gradually take shape, although these streams are not necessarily uniform in any one individual. Gardner argues that the essential raw material for three of these developmental streams--child as the "maker," "audience member," and "performer"--is normally present by age 7 or 8. The fourth stream--child as "critic"--is thought to depend upon further qualitative change, notably the achievement of formal operational thought. More recently, Gardner has recognized special features of different symbol systems in a treatise on children's scribbling and drawing behavior (Gardner, 1980-a). He thus joins in a tradition built by a cadre of earlier writers (see Selfe, 1980) concerned about the psychological significance of scribbling.

While Gardner explores nooks and crannies in the aesthetic labyrinth, psychobiology (Berlyne, 1971) provides insights about information processing and the hedonic value of perceptual stimuli. These insights furnish a strong basis for recent experimental aesthetics studies, to be discussed shortly. Other theoretical forces at work in the study of children's aesthetics are perhaps more familiar. Gestaltists have persistently emphasized principles of perceptual development and learning in the grand manner of Kobler, Levin, and Wertheimer (see Swenson, 1980). Contemporary cognitive psychologists prefer to view the arts as knowledge and ways of knowing. For children, knowledge is largely a function of their ability to sort, classify, and draw increasingly from concrete and symbolic characteristics that inhere in artworks. Psychodynamic theories generally emphasize

imaginative wish fulfillment and fantasy disposition in creative expression. Aesthetic emotion is secondary to more primary desires and conflicts of a personal, possibly unconscious, nature, and creativity is more often studied than aesthetic sensitivity per se. From humanistic psychology come phenomenological nuances with particular attention to a perceiver's subjective experience with art. Aesthetic sensitivity is associated with the development of active, flexible, and open perceptual experience. Finally, and predictably, behavioral psychology (including social learning theory) focuses upon environmental variables that may exert control over aesthetic response. Behavioral analysis procedures are not widely visible in the aesthetics literature and are generally incompatible with humanistic approaches on both philosophical and methodological grounds (Child, 1973).

STRATEGIES IN AESTHETICS RESEARCH

Sound data for an understanding of aesthetic sensitivity and judgment are dependent upon the validity and reliability of techniques used to gather them. We observe that measurement of aesthetic response is problematic for adults, to say nothing about young children. This section examines the three most common approaches to the problem: the general methodology for experimental aesthetics, aesthetics tests, and the structured interview procedure.[2]

Experimental Aesthetics

Controlled experimental aesthetics studies typically involve presenting individuals with one or two types of stimulus material and then monitoring some variety of consequent verbal or nonverbal response. The more conservative material consists of artificial stimuli such as nonsense shapes, geometric designs, or patterned line drawings. A more liberal approach

involves acknowledged masterpieces of artistic creation or other genuine artworks consensually defined by experts as being lesser.

Either way, attempts are made to isolate or otherwise manipulate variables represented in the material that may influence aesthetic satisfaction, preference, or judgment. Several classes of independent variables are studied, including major groups of psychophysical or collative variables (Berlyne, 1971). Psychophysical variables concern some physical dimension of stimulus attributes, such as intensity, size, color, or auditory pitch. Collative variables encompass structural or formal aspects of stimulus patterns and encompass novelty, surprise, and complexity with frequent attention to attributes such as proportion, symmetry, balance rhythm, and consonance. Emphasis varies according to the precise nature of a stimulus pattern (visual, auditory, tactile, and so on).

For either class of independent variable, verbal judgments of preference, pleasure, interest, emotional meaning, or power of a stimulus to induce uncertainty or conflict normally serve as dependent variables for experimental study. A more recent technique includes the direct observation of exploratory behavior in the presence of aesthetic objects, duration of self-exposure to objects, direction of personal choice, and (occasionally) nonverbal expressions (e.g., posture, facial expression, smiling, or extent and volume of applause).

A basic assumption from such laboratory study is that verbal or nonverbal reactions approximate those that will occur in response to beauty (or ugliness) in nonexperimental settings. Thus, an experimental aesthetician will argue that data obtained under controlled conditions can assist us in explaining, predicting, and even controlling aesthetic behavior in the "natural" environment.

Testing for Aesthetic Sensitivity

With a notable exception to be presented later, researchers in the field of experimental aesthetics have not studied extensively preschool and elementary school age children. Young children are more frequently represented in studies using tests of individual differences in aesthetic reaction. The most common standard for contemporary tests of aesthetic preference or judgment is the consensual evaluation of artworks by connoisseurs or experts. That is, the closer naive individuals agree with art judgments delivered by a group of recognized art or music authorities, the higher their aesthetic scores.

To illustrate, Child and Iwao (1973) constructed a series of six pairs of contrasting photographic prints to portray aesthetic qualities such as regularity and complexity. Upon exposure to these pairs, preschool- and elementary-school age children were asked to select their preferences. Picture preferences were neither strong nor reliable. Many children were attracted by the poorer artwork, although better work was chosen consistently by a small minority of children. This suggests an open road to the study of personal or background characteristics which differentiate children who prefer good or poor artwork.

A more recent and extensive measure is the Visual Aesthetic Sensitivity Test (Gotz, Gorisy, Lynn, & Eysenck, 1979). This measure consists of 42 sets of two nonrepresentational pictures drawn by an artist of recognized competence, ordered in difficulty, with one picture in each set revealing certain intentional design faults. Theoretically, aesthetic choice should more frequently involve the unflawed picture. A consistent assumption is that the more "correct" choices one makes, the higher one's level of aesthetic development.

Still other tests of aesthetic sensitivity for use in research involve both art (Bell & Bell, 1979; Hill, 1972; Salkind & Salkind, 1973; Roosevelt, 1977) and music (Anderson, 1975; Bullock, 1973; Geringer, 1977; Shaw & Tomcala, 1976). As compared to other measurement strategies for aesthetics, such tests are more practical for field use. But their nemesis is technical adequacy (i.e., sufficient reliability and validity). As for most testing procedures, measurement reliability for aesthetics tests increases with age of subjects. Since measurement validity cannot exceed reliability, the use of tests with younger children can be risky. And this says nothing about types of validity per se. Criterion-related validity is generally limited to the standard of expert adult judgment as indicated above. Further concurrent and predictive validity studies for aesthetics tests are sorely needed.

The Probing Interview Strategy

A popular alternative to testing for aesthetic reactions is the structured interview method. This less formal measurement alternative signals the increasing presence of cognitive-developmental theory in aesthetics study. Piaget, for example, has influenced aesthetics research in two important ways: first, through researchers' use of the methode clinique to explore children's knowledge and conceptions of the arts (e.g., Gardner, Winner, & Kirscher, 1975) and second, as a source for the hypothesis that cognitive aspects of aesthetics-related behavior may develop in stage-sequential form parallel to, if not subsumed by, qualitative changes in logical thought structures. I hasten to add that Piagetian theory has little directly and specifically to say about aesthetic development. Rather, the theory guides aesthetics research by way of implication.

A typical study of the interview genre has children of different ages respond to open-ended questions about some work of art (a painting seen or a poem or musical selection heard). Recorded protocols are then analyzed according to ideational content relevant to aesthetics (e.g., how art is produced, ways of describing art, and criteria for evaluating art). Categorizations of ideas are sought for comparative purposes across age groups. Any legitimate "stage grouping" of ideas is dependent upon the presence of reliable, age-related differences in aesthetics response which have a credible relationship to information processing and sequential change as represented by cognitive-developmental theory. A principal hazard to validity of results is excessive liberty in forcing gross verbal protocols of dubious reliability into conformity with a pre-existing theoretical framework.

We are advised here that use of the structured interview method does not by itself betray a Piagetian bias; atheoretical studies have utilized the interview method. Moreover, some developmental studies are limited to descriptions of age-related art preferences with no probing of children about why they may like or dislike given artworks. Finally, this developmental approach to children's aesthetics is nearly exclusively cross-sectional in design methodology. The field lacks strong longitudinal research. For example, no studies based upon improved methods for life span developmental study (e.g., Baltes, Reese, & Lipsitt, 1980) have appeared to grace the journal literature.

MAINSTREAMS OF AESTHETIC RESEARCH

Having illustrated three major methods for children's aesthetics research, a sampling from the potpourri of related arts studies is attempted. These studies are organized into three clusters of research activity:

developmental studies, with their emphasis upon age-related trends in aesthetic response; studies concerned primarily with sources of individual differences in aesthetic response (excepting age); and deliberate attempts to influence the cause of aesthetic growth and development, including aesthetic education. At the onset it should be noted that, for reasons discussed elsewhere (e.g., Child, 1981), all three streams of research activity have been dominated by the visual arts. Developmental studies have mostly involved experimental aesthetics methodology and the verbal probing strategy. Studies of individual differences usually are biased toward testing of one kind or another, as are intervention studies focused upon the impact of arranged aesthetic experience.

Developmental Studies

Preference for complexity. Among the most frequently studied collative variables in children's aesthetic response is stimulus complexity. As Berlyne (1971) has observed, complexity in the arts varies by degree of ornamentation or embellishment. Thus, elements are added to a basic pattern: lines, colors, scaled representations of objects, abstract symbols in paintings, and subsidiary notes in music. Or, deviations from a basic pattern are introduced, such as vibrato or rubato in music. The more independently selected elements in a given pattern, the greater the complexity or diversity. An important research question, then, concerns the effect of complexity or diversity on human aesthetic response and judgment.

Studies generally show that aesthetic preference across art forms changes with age in the direction of increased complexity (Chevrier & Delorme, 1980). This trend is presumably related to changes in perceptual ability, with preference based on some form of pleasure tied to perceptual

functioning. Laboratory study of the phenomenon, however, is not always simply described. In part, the situation is affected by a researcher's choice of dependent measures, as voluntary looking time versus preference ratings. These measures do not have the same meaning for estimating an aesthetic reaction. In fact, these different measures underly an important distinction between "interestingness" and "pleasingness."

McWhinnie (1971), for example, emphasizes the interest value of increasing complexity in visual designs; finding such a design pleasant is a more characteristic response to simpler designs. Wohlwill (1975) also reports different results about the role of diversity in scenes of the physical environment and in constellations of postage stamps, depending upon which of the two criteria (looking time or preference) is used. For the environment scenes, diversity and looking time increased monotonically; for the postage stamp constellation, preference peaked at moderate or intermediate diversity. In neither case, however, were consistent age differences noted among children from grades 1 through 8. As Wohlwill observes, complexity alone may elicit both modes of response, but when meaningfulness is introduced (diversity in actual scenes versus random line drawings or nonsense shapes) the situation changes.

This difference in stimulus material has provided a longstanding debate among supporters of the "old" and "new" experimental aesthetics. Purists fear contamination by anything but strictly objective stimulus material; realists argue that the use of artificial stimuli begs the question about aesthetics in daily life. Thus, using real art (woodcuts) and photoreproductions of original art, a curvilinear relationship for complexity preference has been observed among children ages 6 to 10 (Farley & Weinstock, 1980). That is, for both stimulus modes and in contrast to

adult preference for high complexity, the children were found to prefer moderate complexity to either high or low complexity. This relationship was particularly strong for the "real" art.

From these data, the authors suggest that real artworks of intermediate complexity are more likely to elicit aesthetic enjoyment for young school children. Such works could be used in classrooms to "capture or revive" children's interest in art. As for aesthetics research methodology, the message is more straightforward: the generalization power of visual art studies should increase when original artworks are used instead of reproductions. Quite inconsistent and unclear relationships between preference and complexity appear when artificial stimulus material (e.g., random polygons) is used, especially for preschool and primary grade children (Aitken & Hutt, 1974). In contrast, 4- to 6-year-old children (especially females) have presented a reliable age trend toward preference for complexity in book illustrations (Danset-Lager, 1975-76).

As for music, clear preferences for melodies with intermediate (versus low or high) complexity and low to moderate levels of melodic repetitiveness (redundancy) have been observed by grade 4 (McMullen, 1974). But later research is more equivocal. Eisenstein (1979) investigated the effect of complexity and redundancy conditions (as represented in musical form, dynamics, rhythm, and multiple combined elements) on the music selection and listening time behavior of musically naive primary and intermediate-level elementary-school children. Patterns of music selection behavior were similar across grade levels, showing a predictable age trend in preference for increased complexity or less repetitive listening. Primary-grade children, however, generally listened longer to a more varied range of music than did children at higher grade levels. The author courts tautology by

concluding that music is more reinforcing for younger than for older children. Yet her data and those from related studies suggest an age-related convergence on preference for music of familiar styles, especially rock and easy-listening pop music, with spurious relationships to collative properties. Of course, nature and extent of musical training might make a difference in the power of collative properties to influence musical preference across styles. In fact, aural skills important for discriminating collative properties of music have been more strongly linked to number of years of piano study than to certain other experimental variables, such as extended instruction on single instruments and ensemble participation in either vocal or instrumental groups (May & Elliot, 1980).

To account for complexity preference and the impact of other collative variables, we can return to the hypothesis that human aesthetic reaction is based upon the positive hedonic value of a perceptual experience (Berlyne, 1971, 1974). Positive hedonic value is considered a function of arousal, the mechanisms for which are associated with reward and aversion systems in the brain. Accordingly, principles of neuropsychology have crept stealthily into the human aesthetics research camp. This research ultimately may be relevant to educators for understanding the arousal potential of stimulation as well as procedures for tension relief or dearousal. That is, it is plausible to argue that aesthetic patterns can induce pleasure by first increasing then reducing arousal, as well as by encouraging an oscillation between the form and content of artistic works. Such pleasure could be a foundation for aesthetic appreciation. The anticipation of pleasure could therefore provide motivation for persons to seek out aesthetic experiences. This motivation can be described more simply as the "intrinsic appeal" of beauty in its various forms. The building of such

motivation may constitute a long-term objective of aesthetic education. To reach this objective, however, we must learn what characteristics of aesthetic patterns can reliably incite inner activity in a positive sense. As a beginning, it seems clear that complexity is an important collative variable in aesthetic patterns. Hypotheses from rational aesthetics may also assist us toward better understanding (Beyer, 1974). Philosophers often stress some version of the principle unity in variety as central to genuine aesthetic experience. According to this interpretation, aesthetic delight derives from the active process of weaving contrasting parts of an artwork into a unified complex whole. Skilled perceptual weaving, then, may be taken as still another basic objective for aesthetic education.

Aesthetic discrimination and judgment. Children's aesthetic discrimination and judgment has been assessed as it relates to four general categories within the arts: visual arts, music, literature, and related art forms (such as dance and theater arts).

1. Visual arts: Studies patterned on the methode clinique consistently reveal predictable age-related trends in children's thinking and judgments about visual art. Younger children's strong concern for subject matter and color gradually give way to increased interest in technical and thematic qualities: mood, theme, and surface features, such as configurations (Murphy, 1973; Rosensteil, Morison, Silverman, & Gardner, 1978). A shift from egocentricism to greater perspective taking is also apparent in children's gradually increasing ability to separate subjective preference from a more objective analysis of art properties and recognize attributes of a good artist and the feeling component of paintings (Clayton, 1975; Johnston, 1978; Parsons, Johnston, & Durham, 1978). Yet both primary- and intermediate-grade children often retain a preference for realistic

paintings of familiar objects and brightly colored artworks (Rump, 1967, 1968). Thus, while criteria for sorting and analyzing artwork change with increasing age, concordant preferences may not.

More specifically, Burkett (1978) has documented a rough sequence in the development of children's classifications of objects as art or non-art. Within the age range of 5 to 8 years, children's concepts of art were focused upon manipulative activity (art as "making something"). The period from 9 to 12 years revealed greater intellectual analysis of art properties, with infiltrating visions of imagination and creativity ("art as an idea"). This analytical approach continued among children past age 12 and included an increased attention to the expressive quality and cultural contents of art. Still more specifically, young children (ages 4 to 7) reportedly differ from older children in being more concrete, mechanistic, and legalistic in their response to probes about artwork (Gardner et al., 1975). Younger children focused on the materials used to create artwork, the actions of production, and the rules or conventions about what is proper for making or changing artwork. Ideas about the origin of art were fuzzy, even if correct. Identities of works (as symbolic units) were not well understood, if even recognized. And the children's art evaluation, generally undifferentiated and egocentric ("It's good because I like it"), revealed little awareness of criteria apart from appeals to authority.

Murphy's (1973) study of children's affective reactions (e.g., "great," "terrible") to an oil painting by Chagall and a live opera performance sung in English corroborate the relatively primitive level of aesthetic development in young children. Eight criteria were used to analyze children's verbal professions: subject matter, sensory elements, formal properties, technical competence, expressive elements, general

perceptual interest, extra aesthetic function (stimulus to further thought), and communication (symbolization or meaning). As predicted, younger children (ages 6 to 7½) used fewer criteria--usually subject or sensory elements such as color and harmony. Occasionally, expressive elements (how a work affects feeling) were noted. Higher cognitive criteria were totally absent among the younger children; some were unable to find or use even one criterion. With advancing age, more criteria were referenced with greater age differences for painting than for opera, and impressive individual differences were evident within each age grouping from grades K to 12.

An instructive variation on the clinical method is the children's match-to-sample task. To illustrate, one recent study had children successively examine a series of pencil artworks matched according to the painting style of 10 different artists (DePorter & Kavanaugh, 1978). Each pair was accompanied by a choice array consisting of four additional reproductions. These 10 sets were divided equally into homogeneous (similar themes or subject matter for all paintings) and heterogeneous (varied subject matter) groups. For each trial, children were asked first to select a "match" for the paired paintings from the choice array, then to explain the reasons for their selections. Children's justifications were transcribed, then categorized and judged in three ways: subject matter or theme only, theme and general characteristics of a painting (e.g., clarity and color), and general characteristics of a painting, plus stylistic and technical details (e.g., brushwork, historical references). High scorers tended to be older (ages 12 and beyond) and were apt to base judgments more upon stylistic details than on subject matter.

This finding is compatible with earlier studies of sensitivity to style based upon similar match-to-sample procedures (Gardner, 1970; Gardner & Gardner, 1973). Altogether, these data dramatize the importance of basic conceptual development for style sensitivity, although cultural enrichment may enhance this ability to some degree. A broader conclusion is that both choice reliability and the use of aesthetic criteria for interpreting style are developments that occur relatively late in childhood or in early adolescence. Age-related changes in cognitive style (such as increased field independence and reflective, analytical information processing) surely are implicated. And this leads to an important implication for "training" children for aesthetic discrimination. Skill in discriminating style may require efforts to attenuate or overcome children's natural tendency to center (sort and classify) artworks on a single criterion, such as subject matter or content. In Piagetian terms, preoperational children would seem to be poor candidates for such discrimination training, but transitional and early concrete operational children should provide us with a different story. In any case, sound educational practice will have young children amply exposed to varied art forms before requiring systematic analysis or aesthetic criticism. This does not rule out strategic discrimination training, especially if artworks that are highly appealing to young children are used for this purpose.

To summarize thus far, related studies of children's response to visual arts yield evidence of age-related characteristics consistent with Piagetian stage-sequential development. But a claim that aesthetic growth is governed primarily by cognitive-developmental principles is risky before we know more about the affective components of human aesthetics (Paal, 1977) and the interplay of personality factors. Also puzzling is the

educational meaning of young children's comparatively primitive state of aesthetic development. To the extent that aesthetic development may be constrained by maturational processes, attempts at early acceleration would seem ill-advised. Yet developmental studies nearly always involve children from the "natural environment" who have not benefitted from specialized aesthetic experience. Thus, it remains for systematic intervention studies to determine how aesthetically capable young children actually can be. Meanwhile, there is scant but reliable evidence that by age 4 or 5, age-related increases occur in the ability to discriminate, describe, and group art styles, most clearly under conditions of direct tuition (Child, 1970, 1972).

2. Music: Turning to music, we find that explicit aesthetic qualities of young children's music experience have not been extensively researched. The attempt to integrate aesthetic experience into generic music education for children has a fairly short history as well (Gonzo, 1971). Apparently, the technical performance tail has wagged the music appreciation dog all too vigorously in the past. Those studies from music appreciation most relevant to aesthetics concern music perception. For example, Child (1970, 1972) reports that by age 7 or 8 and thereafter, fairly reliable and knowing melodic perception can be observed; individual differences in pitch, harmony, and rhythm perception also appear as early as age 6, along with skills in rhythm reproduction, such as tapping.

More recently, normative sequences of the musical response among preschool-age children have been derived from direct observation, tests, and tape recordings of the singing of over 500 children (Moog, 1976). By age 3, for example, most children are capable of imitative singing. By age 6, the repetitive spontaneous motor movements to rhythmic music,

characteristic of earlier age periods, have largely disappeared. Melody recognition (sans lyrics) is apparent by age 4, but by age 5 as many as one in four children still lack this ability. Awareness of harmony, or ability to analyze notes of different pitch when sounded simultaneously, is not reliably observed among normal preschool-age children.

Further normative study is addressed to advanced conceptual aspects of music. Research within a Piagetian framework has disclosed that children's ability to fully identify and understand meter in music is rare until around age 9 (Jones, 1976). Development up to that time is broadly consistent with Piaget's stage analysis of time concepts in general. In a more narrowly focused study of primary grade children, Perney (1976) failed to confirm the Piagetian idea that conservation of metric time in music tasks develops in an invariant sequence.

These normative data are concerned largely with music perception and cannot tell a complete story about aesthetic growth. Schwadron (1975) offers evidence of heightened interest in music aesthetics and education research, arguing that the development of capacities for "sensitive-critical" music experience must be fused with growth in musical perception and response. This idea points to the basic issue of the precise qualities of an aesthetic response to music. Payne (1980) claims, with modest empirical support, that a unique aesthetic emotion exists distinct from "ordinary" human moods that are influenced by music listening. If correct, Payne's work may fit well with broader psychobiology theory. Other factors in music appreciation concern interest more directly (Payne, 1980). These factors include the formal or textural structures of music, its historical significance, and instrumentation or orchestration, as well as (to a lesser degree) extra-musical implications (e.g., visual, dramatic, or

philosophical). Taking musical interest as partly a function of understanding, musical training should exceed sheer familiarity with music in its power to enhance appreciation.

Working independently to define music aesthetics, Hargreaves and Colman (1981) offer five categories of aesthetic response to varied musical experiences: categorical (classifying music style or type as "classical," "traditional jazz," "folk," etc.), objective-analytic (awareness of technical elements, such as tempo and instrumentation), objective-global (the intrinsic quality of music as a unified whole), affective (subjective emotional and evaluative responses, such as "sad," "awful," "strange"), and the associative (extra-musical associations triggered by sounds, such as "birds in the jungle" or "wind and sea," although associations higher on the aesthetic scale, including relationships with other musical elements, belong here as well). The authors argue from data that the affective and associative elements are most apparent among children and naive adults. The objective-analytic response is more likely from trained musicians. At least, Hargreaves and Colman (1981) present a workable taxonomy for musical aesthetics. But the present data bank in music research is insufficient to portray clear sequences of developments across these categories.

A closely related area of study, however, involves the explanation and prediction of music preferences. LeBlanc (1980, 1981) proposes several major sources of variation in preference, which range from the stimulus properties of music, through social context factors, to the personal characteristics of the listener. LeBlanc has shown that fifth-grade children's musical preferences are strongly related to generic styles within the concert and popular music traditions, with tendencies to favor faster tempos and the instructional (versus social) medium. LeBlanc advances

some plucky implications for sequencing children's introductory experiences in both jazz and art music, which provide a basis for further research. Elsewhere (e.g., Hargreaves, Messerschmidt, & Rubert, 1980) we learn that as compared to naive peers, musically trained children give higher ratings of both quality and preference to unfamiliar music, although both groups respond more predictably to familiar music.

Perhaps closer to aesthetic experience in music is the developmental study of musical style sensitivity. Gardner (1973-a) studied five groups of 10 male and 10 female children, whose modal ages were 6, 8, 11, 14, and 18 to 19. Style sensitivity was defined as skill in detecting whether two musical excerpts were drawn from the same piece of tape-recorded music. Baroque, classical, romantic, and modern styles were represented. Detection errors decreased progressively as age increased, with females generally surpassing males in accuracy. Except for the college-age group, error scores did not change upon subjects' hearing the same selection a second time. The important finding for early childhood educators is that bright primary-grade children reveal a dawning sensitivity to musical style for which select cue discrimination and decentering are requisite. Like most studies, Gardner's research is descriptive and provides no direct information about mechanisms or processes of style sensitivity. That some young children are alert to stylistic features in music, however, gives us sufficient reason to explore further for details about process.

Finally, a series of studies by Zenatti (1976a, 1976b, 1976c) brings together concerns for young children's musical preference and interest with background factors and individual differences. Marked preferences for consonance, tonality, and rhythmic patterns were noted by age 5, again with females excelling over males in measures of music appreciation.

Clear signs of musical interest in harmony and melody were seen as early as age 4, with strong definition by age 7. Background factors most highly associated with musical interest, in order of importance, were paternal occupational status, emphasis upon music appreciation in the home, and beginning voice or instrument training. The apparent influence of musical acculturation on children's levels of aesthetic judgment was manifest as early as age 4½ vis-a-vis children's sharp preferences for certain rhythmic patterns (especially pulsation) and on a perceptual level in terms of melodic versus nonmelodic contexts for rhythm.

Since Zenatti's studies involved French children, their findings cannot be generalized unequivocally to the American experience. They do, however, support a growing belief that very young children are capable of more complete musical aesthetics than has formerly been thought (Schwadron, 1975). It seems reasonable to conclude that important foundation experiences for early aesthetic development are to be found in the home. Unfortunately, almost nothing is known about children's concepts of the "beautiful" in music, notwithstanding studies of musical taste. Neither has any semblance of understanding been reached about music improvisational behavior. Because music improvisation is characterized by a substantial affective display, usually spontaneous and impassionate, the origins and development of this form of musical expression seem ripe for aesthetics research.

3. Literature: Literature is usually brought to preschool and elementary schoolchildren as "language arts," although children's literature is rarely treated as an art form (Greene, 1976). That it can and should be are increasingly popular notions among aesthetic-minded educators. These intentions are praiseworthy, but psychological research about children's

response to literature has yet to furnish a distinctly aesthetic flavor. One early toehold for understanding children's sensitivity to literary style comes from a study of children in grades 1, 3, 6, and 9 (Gardner & Gardner, 1971). Not surprisingly, older children showed greater ability to recognize and work with different storytelling styles. Though stylistic awareness was rather weak throughout the sample, a few individuals excelled at each grade level, again highlighting a wide range of individual differences.

Heeding the call for more definitive research, a second study involved oral presentations of prose and poetry to children at ages 7, 11, 14, and 19 (Gardner & Lohman, 1975). The task required matching and discriminating differences among various stylistic features of the literature (e.g., narrative, rhythm, word use, syntax, mood, and sentence types). Reasons given by the subjects were probed in the manner of methode clinique. By this measure, explicit awareness of stylistic features was shown to be generally absent until early adolescence. A strong figural orientation was characteristic of younger children. That is, their attention was drawn more to specific elements (names, objects, plot details, and common objectives) than to matters of style. Yet, even the 14-year-olds seemed insecure in making judgments, and figural elements were still prominent in their interpretation. Oldest subjects gave clear indications of style sensitivity, but individual differences were remarkable even at this advanced level. All told, the authors infer that, as compared to art and music, literary style sensitivity proceeds somewhat slower, at least in the absence of specific training. Finally, the authors underscore the importance of cognitive development level for literary style and analysis. Such analysis often requires attention first to a work's semantic properties and

second to the way in which prose or poetry is ordered to achieve given meanings. This secondary step probably depends upon formal operational thinking, a development not observed much before middle adolescence.

Closer to early childhood, Juscyk (1977) studied first- and third-grade children's appreciation of poetic devices, including rhyme, rhythm, and alliteration. Rhyme and rhythm attributes influenced children's preferences in positive fashion, with rhyme especially influential for the younger subjects. Alliteration had no apparent effect. First graders, in fact, had problems in attending to alliteration. An understanding of how poetic devices function was generally low throughout the entire sample. Similarly, preschoolers have expressed a greater liking for stories in verse than in prose form (Hayes, Chemelsky, & Palmer, 1982), although story event retention was stronger for prose.

Both the Juscyk and Hayes et al. studies dramatize the importance of cognitive development for children's response to literature. Juscyk illustrates how limited young children can be in their understanding of form and content relationships in literary art. The Hayes et al. findings challenge a popular belief in early childhood education about the facilitative effect of rhyme on young children's story comprehension.

Concerning prose, Guthrie (1977) points to the value of structure for story comprehension and maintains that young listeners and readers quickly develop an expectation that stories are governed by select rules that pertain to setting, theme, plot, and resolution. But young children's awareness and appreciation of structural variations in stories has not been studied much. Applebee (1979) has taken promising steps to provide observational and anecdotal data about how children as young as age 2½ begin to distinguish storytelling from other language functions. It is

tempting to argue that aesthetic satisfaction may result as children search for meaning in stories and master the rules for story structure.

Beyond these few studies, most research about children's response to literature involves secondary-school age subjects and is lean in specifics about any aesthetic experience. Linguistic experience, however, may provide a breakthrough in adjoining aesthetics across diverse art forms, most particularly through children's metaphoric understanding. Possible relationships between verbal and visual metaphor and the role of metaphoric thinking in aesthetics constitute exciting topics for developmental study (see, for example, Gardner, 1980-b; Greenberg, 1979; Kogan, Conner, Gross, & Fava, 1980; and Winner, Rosensteil, & Gardner, 1976).

4. Related art forms: Related art forms, such as the dance and theater arts, have received distressingly little attention among research aestheticians. At a theoretical level, issues such as expressive versus cognitive theories for analysis of dance aesthetics are noteworthy (Snoeyenbos & Knapp, 1979). Best (1975) discusses problems in studying dance aesthetics, and McColl (1979) extrapolates from aesthetics theory to explain how the dance can serve as a medium for dance education. A model for studying (and teaching) movement creativity based upon Guilford's (1967) factor analytic work about creative production (fluency, flexibility, originality, and elaboration) has also been proposed, but has apparently remained untested (Dodds, 1978). Some authorities might extend matters of children's dance to the broader movement education literature (e.g., Curtis, 1982; Gilliom, 1970). But writers ordinarily distinguish the content of children's dance from movement education by emphasizing expressivity or improvisation and aesthetic elements that appear to some extent in all art forms (e.g., mood or theme, form, rhythm

and balance, contrast, symmetry/asymmetry, and accent). Theoretically inclined readers are recommended to Sandle (1972) for a basic statement about aesthetics and qualitative movement. For the empirically minded, Parsons and Lindauer (1980) provide one of the few psychological studies about the dance experience and aesthetic characteristics of dance participants, albeit based upon adult subjects. On balance, the dance and theater arts represent uncharted territory for early childhood aesthetics research. This, despite a long-standing tradition of research on children's play which, of course, often takes form in creative movement and dramatics.

Aside from the dance, aesthetics research of likely interest to students of early childhood include areas in which only beginning steps have been taken: the aesthetics of visual literacy in relation to television and the cinema (Feldman, 1976; Kelly & Gardner, 1981; Sudano, 1978), consumer aesthetics (Holbrook & Huber, 1979), the aesthetic in sport (Best, 1974), and the aesthetics of environmental planning and design (Basch, 1972; Honig, 1978). Concerns for the latter topic illustrate how widely ranging aesthetics theory and research can be. A provocative twist on aesthetics consistent with Berlyne's (1971) theory is that the stimulus characteristics of objects or events that elicit aesthetic pleasure in general (such as complexity, novelty, unexpectedness) may also apply to the enjoyment that individuals reportedly experience from performing destructive acts such as vandalism or property damage. Support for this idea comes from a unique experiment with college students about glass breakage. Greenberger and Allen (1980) found that a person's destructive behavior is strongly influenced by anticipation of exertion effort and complexity effects consequent to demolition. In general, the more effort

believed necessary to destroy and the more complex or sensational the expected effects of demolition, the more satisfying the destructive act. It is not unreasonable to suggest that young children may behave similarly under such conditions. One needs to look no further than the toy-room for anecdotal evidence.

Individual and Group Differences

The study of psychology requires the study of individual differences, and aesthetics tests have been widely used for this purpose. One important step in the direction is cross-cultural comparative research to determine any degree of transcultural similarity in aesthetic response (Child, 1981). Thus, the visual aesthetic reactions of culturally different male and female children ages 7 and over have been assessed by the Visual Aesthetic Sensitivity Test (Chan, Eysenck, & Gotz, 1980). Considerable similarity among these children was observed, especially for females. As a group, children from Hong Kong scored somewhat lower and German children substantially higher than did their Japanese and English counterparts. Within-culture factors cannot be overlooked because the findings ran parallel to the comparatively lower and higher socioceconomic status of the samples from Hong Kong and Germany, respectively. Socioeconomic background has also surfaced in related studies, including preferences for sensory attributes as a basis for sorting objects. Seaman (1974), for example, found that 5-year-old middle- and lower-class children consistently used form and color, respectively, for this type of task. Much remains to be known about the reliability of and reasons for any socioeconomic status differences in aesthetic development. (Our current aesthetics database has been established to an overwhelming extent upon middle-class subjects.)

Further study of cultural variables has yielded puzzling results. For example, one large-scale comparative study of aesthetic sensitivity involved American and Japanese children, of both sexes, in grades 1, 4, 7, and 10 (Harris, DeLissovoy, & Enami, 1975). Children's "art appreciation" scores were determined by extent of conformity to experts' judgments of 60 pairs of art reproductions presented in the form of slide photographs. First graders' preferences showed highest agreement with the experts, a result unaccounted for by degree of picture brightness, realism, or familiarity. Agreement with experts declined to grade 7 with a "rebound" occurring at grade 10, except for the Japanese males, who continued their wayward response. The exclusive use of Western art in this study is suspect. Even so, Japanese children as a whole showed higher absolute appreciation scores than did their American peers. This suggests a possible cultural influence and may include a difference in educational experience. Results from other cross-cultural studies tease us about the role of biological, hereditary, and maturational factors for a general aesthetic dimension of human development (Brody, 1972; Burt, 1960; Farley & Ahn, 1973). Yet a most striking impression from such studies is that American children and youth appear infrequently as top scorers on tests of aesthetic reaction.

Within United States culture, the application of similar measurement methods has more consistently illuminated relationships between aesthetic reaction and personality. Among the more reliable personality correlates of aesthetic sensitivity in older subjects are cognitive openness and flexibility, field independence, autonomy of judgment, tolerance of ambiguity, and empathy (Child, 1972; Machotka, 1970; McWhinnie, 1971). Since these correlates have developmental histories, there is reason to believe that their relationship to aesthetic sensitivity could also be documented at

younger age levels. Measurement problems complicate this search. Discerning readers will note that a similar cluster of personality characteristics is often associated with high creativity ratings (Wallach, 1970). Yet creativity--especially as operationalized by measures of divergent thinking--is not uniformly correlated with aesthetic sensitivity among older subjects (Anderson, 1971). Unfortunately, with so little data available, one cannot say much about the reliability of such relationships.

Because many of the personality correlates of aesthetic sensitivity resemble dimensions of perceptual development (including fine perceptual discrimination) it is tempting to argue for a strong cognitive-skills analysis of the aesthetic response. Indeed, Bilotta and Lindauer (1980) conclude that selected cognitive skills may be more important than conventional artistic training insofar as our capacity to respond to the arts is concerned. Along these lines, preference for either linear or "painterly" art styles has been associated with cognitive styles among college-age youth (Savarese & Miller, 1979). But the critical questions for early childhood educators call for data about the origins of perceptual style differences, how affective development may be intertwined with them, and what early learning experiences may influence the quality of perceptual development vis-a-vis aesthetics.

Very little direct information is available to help us with these questions. Both parental attitudes and early home stimulation may figure prominently as sources of developmental influence on aesthetic perception (Freeman, 1976), and these sources may be linked to socioeconomic status, as mentioned earlier. Gardner's (1976) intensive longitudinal study of five first-born children from infancy onward suggests that individual differences in styles of inquiry or exploration are apparent as early as age 2.

Possibly these stylistic differences are linked to parental teaching style. Though difficult for extrapolation purposes, infant perception research may eventually be instructive to aesthetic buffs. For example, preference for vertical symmetry (versus horizontal symmetry and asymmetry), can occur as early as age 1 (Bornstein, Ferdinandsen, & Gross, 1981). Developmental study indicates that, by age 9, children's perceptions of symmetry are similar to those of adults. Common maturational processes are surely at work here (Brody, 1970). But provocative hypotheses about aesthetics and neuropsychology, including the matter of hemispheric dominance, may result in fruitful research (see Ellis & Miller, 1981; Foster, 1977). Once again, a major limitation of most existing aesthetics research is its relative lack of the representation of children below the kindergarten/primary grade level.

Intervention Research

Common experience tells us that many, if not most, chidren gradually become aesthetically sensitive to some degree--at least on an intuitive basis. Aesthetically inclined educators, however, prefer not to leave this development to chance. Neither are they apt to be satisfied with an intuitive or otherwise unrefined state of aesthetic development. So education in some form is seen to enable some extent of control over children's aesthetic development. Thus, Broudy (1976) argues for the importance of aesthetic education because "imaginative perception and perceptive imagination need to be cultivated in everyone" (p. 29). Smith (1976) concurs by championing an educational policy for aesthetics that is capable of "inducting persons into the artworld" and sharpening "basic aesthetic skills . . . in the art of appreciation" (p. 7). Similarly, Eisner (1976) heralds the value of <u>educational connoisseurship</u>, meaning appreciation in the sense of

an awareness and understanding of all aesthetic experience. Appreciation is seen as the basis for advanced aesthetic judgment and criticism.

No one expects that young children necessarily could or even should become precocious connoisseurs of the arts. But important precursors of connoisseurship as may be subject to controlled experience and that reside in perceptual skill, attitude development, and knowledge about art are fair game for psychological or educational research. For convenience of discussion, the few existing intervention or manipulative studies about children's aesthetics are classified into two related groups. The first group concerns specific attempts to "train" one or more aspects of aesthetic response under relatively well-controlled conditions. The second group involves broader scale, more general programmatic interventions.

Training studies. Aesthetic response training studies are characterized largely by specific attempts to modify specific aspects of aesthetic response. Thus, Gardner (1972) has shown that children as young as age 7 can be instructed accurately to sort paintings according to stylistic criteria. Children's skill in detecting recurrent Gestalten was not necessarily dependent upon a full capacity for concrete operational thought. Even young children of kindergarten age have demonstrated the ability to form and generalize concepts from visually complex art under conditions of instruction (Clark, 1972). Kindergarten children have also responded well to systematic training for texture discrimination (rough/smooth), using appropriate accompanying vocabulary, by subsequently incorporating texture into their drawings and describing texture in the artistic works of others (Seefeldt, 1979).

Type and quality of training, together with extent of longer-term effects, are clearly at issue in this research. Considering young children's

developmental levels, multisensory approaches would seem advantageous. Further, training may be more sensible in contexts explicitly conducive to aesthetic expression. Precedent comes from a study of 4-year-old children who experienced a "multisensory-cognitive curriculum" in a specially designed aesthetic environment (Taylor & Trujillo, 1973). These children revealed substantially greater aesthetic qualities in their own artworks, as compared to controls who assessed the same curriculum in a conventional environment. Critical judgment abilities were unaffected in both groups.

Similar findings about training selected components of aesthetic response appears in music research. The major assumption underlying much of this research is that finer early music discrimination skills will predispose qualitatively better aesthetic development. Thus, Jetter (1978) established a systematic aural/visual identification procedure for instructing young children in a heirarchy of music learning tasks: identification of instrument timbres, exact melodic repetition, and half-step intervals. Most 4-year-olds in urban day care and suburban preschools who received this instruction demonstrated mastery level achievement on these tasks, regardless of their musical aptitude differences. Hair (1973) also provides clear evidence that first-grade children can be quickly trained without encumbrance to perform basic harmonic discriminations (i.e., to determine differences between chords and associate tones with chords according to conventional tonal construction).

Convinced that primary grade children normally do not know how to listen to "high quality" music with understanding and enjoyment, Trammell (1978) established a brief, five-session listening program based upon repetition and guidance. This involved alerting children to technical aspects of music (mood, tone, color, melody, form, and rhythm). As

compared to controls, guided children increased their self-reported enjoyment of music. Lack of follow-up or transfer of training assessment suggests that these results be interpreted with caution.

As in art skills training, contextual factors in music training studies cannot be overlooked. Both teacher and peer influences are noteworthy. One of the apparently few aesthetics studies based upon behavior analysis procedures involved a contingent teacher approval/disapproval feedback strategy tailored to individual elementary-school children (Dorow, 1977). Contingency management was associated with changes in frequency of music listening behavior and attentiveness during music concerts. It is not known how such behavior may have generalized beyond the school setting. A basic conceptual problem with contingent reinforcement, of course, is the possibly insidious conditioning of musical tastes according to teacher preference. Specificity of tastes, at best, is incidental to more basic tasks of perceptual development, aesthetic pleasure, and gradual understanding of criteria useful for aesthetic criticism.

Flohr and Brown (1979) report that both preschool and kindergarten children showed significantly more idiosyncratic expressive movement to music while blindfolded than when working in groups within sight of their peers. This strong imitative effect highlights a possible constraining or inhibiting force in aesthetic movement. Perhaps imitative tendencies could also be harnessed by a creative model (peer or teacher) to enhance the range of expressive movement among children. Either way, the study reminds us of the importance of social context in studying aesthetic behavior.

Hypothesized effects of planned intervention or incidental classroom learning are not always observed in aesthetics studies. Brown (1977), for

example, reports no differences in musical preference behavior, cognitive music skills, or attitudes about school music between controls and children, ranging from 3½ to 5½ years of age, provided with aural discrimination training for either instrumental or vocal music. In short, knowing does not necessarily result in valuing. Depending upon the type and extent of training, certain variables (e.g., age, sensory modality, preference, and musical aptitude) may interact with treatment. Many puzzles remain to be solved along these lines, especially for music aptitude (Schleuter & Deyarman, 1977). To date, aptitude- or trait-treatment interaction methodology for aesthetics study is not much in evidence.

To conclude, recent training for selected aspects of aesthetic response is more often efficacious than not, at least in the short run. More meaningful advances in aesthetic sensitivity require that a child come to understand and explain how artworks can be grouped and analyzed in alternative ways. In visual art, this means utilizing criteria beyond singular classifications, such as subject matter or color. Yet we know that young children's response to artwork is clearly dominated by subject matter. Awareness of formal properties is a relatively late development, at least in the absence of training. Even training, however, may be mediated by more basic cognitive or affective developments, especially multiple classification skills and openness to new experience. Such developments are probably relevant in music as well. Critical listening skills have a key role and, unfortunately, methodologies for promoting them are not commonly found in music materials for teachers of preschool- and primary-grade children (Hair, 1973). Some semblance of formal training can perhaps be justified on the grounds that it increases children's awareness of aesthetic properties, thus increasing their enjoyment of art in a more general sense.

It is somewhat paradoxical, however, that beyond simple queries about children's aesthetic preference, there is little research evidence concerning children's feelings about artwork. In any case, it seems reasonable to argue that training and tests for generalization should occur in a context of experience with real art. This will require careful teacher attention to the aesthetic qualities of the classroom or day care setting. Except for scattered pilot projects, there are few indications that teachers are training in the art of designing an aesthetic learning environment for young children. And the problem of teacher training is imbedded within the broader issue of comprehensive aesthetic education programs in the schools.

Broader programmatic interventions. Provision for organized aesthetic education in school settings requires attention to major issues common to all kinds of educational programming (Smith, 1976). These issues include program rationale, goals, and objectives; curriculum content and sequencing; instructional methods; staff preparation; and evaluation procedures. An arguable assumption implicit in the literature is that aesthetics research and theory can provide a basis for resolving these issues. Even if true, slow progress toward this end has been exceeded by bold, often intuitive or largely philosophical structures for curriculum development. That is, the relationship between aesthetics research and aesthetic education programming is obscure. Regardless, the issue of rationale is especially controversial. Purists argue for aesthetic education on intrinsic grounds; pragmatists more often view the arts as instrumental--as a means to foster comprehensive cognitive/intellectual development. The balance of professional opinion seems in favor of a unified or integrated arts approach to aesthetic education, with rationales and goals varying from one context to

another. This stands in contrast to more traditional and recurrent practices whereby the arts are segmented from the general curriculum or, at best, are supplementary to mainstream education. In this latter case, any systematic aesthetic education depends mostly upon the qualities of individual teachers--arts specialists, in particular.

In true form, however, aesthetic education is not discipline bound. Rather, it concerns sensory utilization, cognition, and affect in the process of arts appreciation. Additionally, the values of creative performance and aesthetic criticism will be imbedded in a total school ecology that can be experienced and analyzed in aesthetic terms (Curtis, 1981).

As with most human endeavor, large discrepancies can be observed between the real and ideal for aesthetic education. Though numerous aesthetic education projects can be culled from the literature, many seem to have passed by the educational establishment like proverbial ships in the night. Or else their sea of influence has been confined to narrow boundaries, if embarkation has occurred at all (see, for example, Colwell, 1970). Programs of general interest to early childhood education include Project AIM (Arts in Motion) (Ramsey, 1980), Project Impact (see Plummer, 1977), Project KAP (Kindergarten Art Program) (Castrup, Ain, & Scott, 1972), and The Bee Hive (Richard & Medeja, 1974). The Bee Hive, for example, is a kindergarten program inspired in part by the British Infant School Model. The arts and play serve as a medium to personalize learning experiences in relation to skill development for sensorimotor language activity and creative expression. Special emphasis is placed upon design of the physical environment and a humanistic climate for learning. Original field implementation involved 2 years of operation with successive groups of 25 and 19 children. Evaluation data, at least in the original

report, are neither extensive nor based upon rigorous measurement. Thus, potential consumers must be content with testimonials about program impact which, incidentally, are guardedly optimistic.

Several less comprehensive educational programs germane to young children's aesthetic growth have appeared. None, however, concern preschool settings. Piper and Shoemaker (1973) describe a prescriptive teaching approach to promote achievement of musical concepts (rhythm, melody, harmony, form, timbre, and dynamics). This program takes form in a series of lessons, complete with behavioral objectives, for weekly integration into regular kindergarten programs. Evaluation data suggest respectable internal validity for this approach to music education. In this same genre, Bradley (1974) evaluated a year-long comparative study of a "traditional and experimental" music education program stressing active listening, cooperative learning, and performance skills. Experimental children showed superior aural acuity and visual-perceptual skills at year's end. No follow-up data are reported, but the immediate results attest to a more dynamic and integrated approach to music than is customarily found in grade school classrooms.

Apparently the most visible, highly developed, and widely implemented single program of comprehensive aesthetics education comes from CEMREL (Madeja, 1976, 1977). A project of interdisciplinary planning, this kindergarten to grade 6 multi-media program is intended to enhance aesthetic perception and provide arts instruction to complement existing art programs. The curriculum takes the form of integrated arts for general education. Daily arts study at each grade level is advised. Visual arts, music, dance, theatre, literature, and films provide core content for implementation by the generalist classroom teacher. Curriculum units are

available for the following topics: aesthetics and the physical world, arts elements, the artist, the creative process, the culture, and the environment.

Formative evaluation procedures, based primarily on qualitative methods, have shaped the development of various units for use at kindergarten and first grade levels (Hall, 1982). At the time of this writing, summative evaluation data are not available, if existent. The trend for evaluation of aesthetic education at CEMREL apparently is an ethnographic approach to idiosyncratic programming by teachers who sample from the CEMREL aesthetics smorgasbord.

A FINAL WORD

Generally speaking, evaluation research on aesthetic education has been weak and sporadic (Wilson, 1974). Longitudinal investigations are in short supply, with little known about long-term gains and transfer beyond the school situation. The state of measurement practice is a particularly sore point. Process evaluation to attest to adequacy of program implementation is conspicuous by its absence from most aesthetic education studies. Stake (1976) is among the few authorities on evaluation to have addressed these problems. He favors extensive use of observation and interview methods in a framework of responsive evaluation. Applications of Stake's methodology are not widely reported. One attempt (Stake & Hoke, 1976) fell short of providing convincing evidence about either program success or failure. It can be argued, of course, that the inquiry process itself can help educators toward a fuller understanding of their programs.

A key figure in this process is the teacher who, unfortunately, is rarely trained to think like an evaluator. Even barring this role, the issue of teacher training for effective aesthetic education is a serious one.

Inspection of normative teacher education curricula reveals comparatively little emphasis upon the arts. Practicing teachers commonly express insecurity and low confidence about bringing effective multi-arts experience to their young charges. It is encouraging that some precedent for improving upon this state of affairs can be found in the Child Development Associate Training Program (Research for Better Schools, 1976) and scattered training projects for aspiring teachers (e.g., Kaufman, 1975).

In addition to nurturing enthusiasm for the arts and coordinating participatory arts experiences, the classroom teacher has a key role in guiding the development of children's aesthetic judgment (Feldman, 1973). For this task, a teacher's level of technical skill is probably less important than a rich background of cultural experience. This may be one factor that distinguishes aesthetic value for children in British Infant Schools from their counterparts in the typical American early school setting. At least, generic American teacher education programs could provide fuller and more focused experiences in aesthetic criticism for their recipients.

Clearly, much work remains to be done to successfully realize our collective human potential for aesthetic growth. We must begin by seeking universal support for stronger arts acculturation in preservice and inservice teacher education, including the formal study of aesthetics and human development. Simultaneously, a skeptical public must be persuaded that aesthetic education is a critical attribute for any concept of basic education. All of this is based, of course, on the assumption that some form of organized aesthetics education can make a positive difference in young children's aesthetic perceptions. Training studies give us reason to be encouraged. Teachers skilled in designing an aesthetic learning environment, using real artworks for children's sensory discrimination ability

training, coordinating home and school aesthetic experiences, and encouraging children's aesthetic expressiveness are the basic ingredient for any degree of successful aesthetics education. It would appear, however, that a thoroughgoing, comprehensive experiment with aesthetic education, complete with longitudinal evaluation procedures, has yet to be attempted in early childhood education.

FOOTNOTES

[1]Strictly speaking, aesthetics as a field of inquiry is neither synonymous with nor restricted to the arts. However, traditional sources of aesthetic heritage--visual and theatre arts, spatial arts, music, dance, and literature--have provided the framework for most scholarly discourse. In short, arts appreciation, not the study of natural beauty, has carried the day.

[2]Present space limitations prevent the examination of a fourth strategy concerned with the analysis of children's artistic products. See Carothers and Gardner (1979) for an illustration of this type of methodology.

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